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# THE EVOLUTION OF THE NIGERIAN MONETARY SYSTEM THROUGH CENTRAL BANK DIGITAL CURRENCIES



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## INTRODUCTION

The financial landscape of Nigeria is never static. Constantly evolving, new services and products are periodically introduced that change the way Nigerians interact with Financial Institutions (“FIs”) and the Nigerian monetary and payment system. Not so long ago, Automated Teller Machines (“ATMs”) and Point of Sale (“PoS”) Terminals were considered new and innovative. Today, Nigerians that own bank accounts may also have a debit card which enables them to move around without cash and use ATMs and PoS terminals.

Furthermore, with the creation of the Nigerian Interbank Settlement System (“NIBSS”) which serves as the central switch [1] for Nigeria, internet banking was introduced which helps Nigerians easily transfer money to another customer within minutes rather than standing in long queues at banking halls just to achieve the same objective. Subsequently, there has been the introduction of mobile banking and mobile money which has made the banking process seem less cumbersome.

These payment systems and methods now serve as the backbone for the Payment Infrastructure in Nigeria and it seems that the Central Bank of Nigeria (“CBN”) wants to create other extensions to support and complement the infrastructure through the creation of its own digital currency called the eNaira.

In this article, we examine what central bank digital currencies (“CBDCs”) are, take a look at the eNaira and the steps that have been taken by the CBN to implement it, the issues that may arise with the creation, adoption, and use of CBDCs, and conclude

with our answer to the question stakeholders have been asking, “Do we need the eNaira?”.

## CBDCs Explained and Distinguished from Crypto

The Bank for International Settlements (“BIS”) released a report in March 2018 on CBDCs [2] which offers different definitions for CBDCs. The first is a simple one which defines CBDCs as a new form of digital money [3]. The more in-depth definition is that CBDCs are “*a digital form of central bank money that is different from balances in traditional reserve or settlement accounts [4]*”.

In another report in 2020 written by various central banks, CBDC is defined as a digital payment instrument, denominated in the national unit of account, that is a direct liability of the central bank [5].

[1] A switch is an entity that facilitates the exchange of value between everyone involved in the financial system. Switches enable transfers, between merchants, customers, banks, card schemes, and many more stakeholders in the financial system.

[2] Bank for International Settlements Committee on Payments and Market Infrastructures, Markets Committee, “Central Bank Digital Currencies”, Bank for International Settlements, 2018.

[3] *Ibid.*, page 3.

[4] *Ibid.*, page 4.

[5] European Central Bank, Bank of Japan, Sveriges Riksbank, Swiss National Bank, Bank of England, Board of Governors Federal Reserve System, Bank for International Settlements, and Bank of Canada, “Central bank digital currencies: foundational principles and core features” Bank for international Settlements, 2020.

The physical cash that we carry about is a legal tender because it has the backing of a centralised institution which is the Central Bank or similar entities in various jurisdictions. Commercial banks and individuals trust in the legal tender largely because it is being issued by a single entity. So CBDCs are digital iterations of the physical legal tender we all carry around to exchange value.

This is one of the major differences between cryptocurrency and CBDCs. While CBDCs are issued by a centralised authority, and have the backing of traditional FIs, cryptocurrency is built on blockchain technology which ensures the decentralisation of the creation, regulation, and use of cryptocurrency through the use of decentralised computer networks. There is no single authority that issues cryptocurrency as every single token or coin is produced, destroyed, and (before any transfer is carried out) verified by miners [6].

Another difference is that cryptocurrency is secured by cryptography, a form of communication that makes it hard for third parties to obtain information about such communication, thus making cryptocurrency largely anonymous. CBDCs on the other hand may be made anonymous by the issuing entity; however, it will still have access to the information provided by the users of the CBDC and will be able to trace transactions easily. Also, CBDCs use digital ledgers, recording and storing transactions on a digital storage infrastructure, like cloud-based storage. These digital ledgers may be created by the use of Distributed Ledger Technology (“DLT”) [7] and blockchain technology, which largely

backs cryptocurrency or the issuing entity may use a central data storage for its CBDC transactions. Cryptocurrency does not have the luxury of picking how to store and record its transactions as the very nature of it demands that DLT should be used as cryptocurrencies are native to a blockchain. Consequently, CBDCs are not cryptocurrencies.

CBDCs are generating buzz in the global monetary and payments system because the potential adoption and use of CBDCs can have far reaching implications on the global financial system. We will highlight some of the potential benefits below.

### **Cross-Border Payments**

Though most CBDCs are created with the focus on its use in the domestic sphere, CBDCs can create a faster and more efficient cross border payment infrastructure for the world. The BIS in July reported to the G20 about the use of CBDCs to make cross-border payments easier [8]. In the report, the BIS highlighted the issues with cross border payments which are, high costs, low speed, too many entities in the transaction chain, etc. The BIS states in the report that CBDCs have the potential to enhance the efficiency of cross-border payments, and the issuance and use of a CBDC for cross-border payments could potentially help simplify intermediation chains, increase speed and lower costs [9]. The BIS posit in their report that if one of the CBDC designs they suggested are adopted (which is the creation of arrangements between central banks which allow foreigners access CBDCs and settle transactions with the use of the CBDC),

[6] If you would like to know more about cryptocurrency, you can check out our article below <https://www.aelix.com/regulating-cryptocurrency-and-initial-coin-offerings-the-nigerian-perspective/>  
[7] “Distributed ledger technology (DLT) is a digital system for recording the transaction of assets in which the transactions and their details are recorded in multiple places at the same time. Unlike traditional databases, distributed ledgers have no central data store or administration functionality.” “Distributed Ledger technology” by Sue Troy, for SearchCIO and TechTarget, accessed 30 August 2021. <https://searchcio.techtarget.com/definition/distributed-ledger> [8] Bank for International Settlements Committee on Payments and Market Infrastructures, “Central bank digital currencies for cross-border payments Report to the G20”, Bank for International Settlements, 2021. [9] *Ibid.*, page 5.

it could change the way business is carried out on a global scale. The report informs the G20 that cross border use is one of the major motivations for central banks on their journey to create their own CBDC [10]

### Cost of Cash

The International Monetary Fund (“IMF”) on its blog [11], posits that the cost of managing cash is very high in some territories due to geographical and environmental conditions. For instance in 2019, the CBN spent more than N64 million on printing money [12]. CBDCs could lower costs associated with providing a national means of payment through printing physical case [13] and essentially save the amount of money spent on the circulation and removal of physical notes in the monetary system.

### Financial inclusion

According to the World Bank, about 1.7 billion adults do not have a bank account [14]. In Nigeria, as at 2018, 60 million adults were unbanked [15]. Central banks and various players are looking for mechanisms to create access to financial products for their citizens and CBDCs may be one of those ways. Why? Because they only need minimal Know Your Customer (“KYC”) requirements. All they require is internet connectivity, a smart phone, and a digital wallet. With internet penetration on the rise, and the adoption of cheap smartphones that have the processing power to handle digital wallets,

CBDCs can potentially become a tool to give financial access to the unbanked and underbanked.

These benefits and more, have led to the Central Bank of the Bahamas issuing their own digital currency called the “Sand Dollar” in October 2020 [16] and has prompted the Peoples Bank of China [17], the Bank of England [18], the European Central Bank [19], and other central banks, including the Central Bank of Nigeria, to kickstart their respective CBDC projects.

## The CBN and eNaira

In July 2021 during the 306th Banker’s Committee Meeting, the CBN Governor, Godwin Emefiele, announced that the CBN will start working on a digital currency [20] and in that same month, a press briefing and a private webinar was held to describe how the digital currency would be designed and when it would commence [21]. During the briefing, the Director of the CBN IT department, Rakiya Mohammed, explained that the CBN had been interested in a digital currency since 2017 [22] and had been conducting its own research.

[10] *Ibid.*, page 6 [11] “Central Bank Digital Currencies: 4 Questions and Answers” by Tobias Adrian and Tommaso Mancini-Griffoli for the International Monetary Fund Blog accessed 30 August 2021. <https://blogs.imf.org/2021/12/22/central-bank-digital-currencies-4-questions-and-answers/>  
[12] Central Bank of Nigeria Currency Operations Department, “Annual Report 2019”, Central Bank of Nigeria, 2019.  
[13] “Central Bank Digital Currencies: 4 Questions and Answers” by Tobias Adrian and Tommaso Mancini-Griffoli for the International Monetary Fund Blog accessed 30 August 2021. <https://blogs.imf.org/2021/12/22/central-bank-digital-currencies-4-questions-and-answers/>  
[14] “Financial Inclusion on the Rise, But Gaps Remain, Global Findex Database Shows” by the World Bank, accessed 30 August 2021. <https://www.worldbank.org/en/news/press-release/2021/04/13/financial-inclusion-on-the-rise-but-gaps-remain-global-findex-database-shows>  
[15] “Fintechs are merely scratching the surface of financial inclusion in Nigeria” by Emmanuel Paul for TechPoint Africa, accessed 30 August 2021. <https://techpoint.africa/2020/10/01/fintechs-financial-inclusion-nigeria/>  
[16] “PROJECT SANDOLLAR: A Bahamian Payments System Modernization Initiative”  
[17] “China releases digital yuan white paper, confirming it is not synthetic CBDC” by Ledger Insights, accessed 30 August 2021. <https://www.ledgerinsights.com/china-issues-digital-yuan-white-paper-confirming-it-is-not-synthetic-cbdc/>  
[18] “Bank of England statement on Central Bank Digital Currency” by the Bank of England, accessed 30 August 2021. <https://www.bankofengland.co.uk/news/2021/apr11/bank-of-england-statement-on-central-bank-digital-currency>  
[19] “Eurosystem launches digital euro project” by the European Central Bank, accessed 30 August 2021. <https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210714-d99198ea23.en.html>  
[20] “CBN to launch digital currency by October” by Olumide Adesina, for Nairametrics, accessed 30 August 2021. <https://nairametrics.com/2021/07/22/cbn-to-launch-digital-currency-by-october/>  
[21] “CBN to launch digital currency by October” by Olumide Adesina, for Nairametrics, accessed 30 August 2021. <https://nairametrics.com/2021/07/22/cbn-to-launch-digital-currency-by-october/>  
[22] *Ibid.*

She revealed that the name of the project is “Project Giant” and the digital currency will be called eNaira. She also stated that the CBN had opted to build the eNaira on a DLT with the use of the Hyperledger Fabric Blockchain [23]

During the webinar and the press briefing, the CBN specified that it planned to use the eNaira for cross border trade facilitation, financial inclusion, monetary policy effectiveness, improved payment efficiency, revenue tax collection, among other things. The apex bank also said that it believes that the eNaira will help FinTechs with their operational efficiency and product building [24]. The CBN reiterated that the eNaira will not replace the traditional payments system and that it would only serve as an assistant to it [25], and stated that by 1 October 2021, the eNaira will be available for use [26]. In August 2021, the CBN showing its intent to meet up with its self-imposed deadline, sent a presentation to commercial banks in Nigeria which detailed various aspects of the eNaira [27]. In the presentation, the CBN explained the operating model of the eNaira, the participants in the project, a high-level summary of the use cases of the eNaira, the role banks will play under Project Giant, and other relevant concerns about the project [28]. The CBN declared during the presentation, that the eNaira is a National Critical Infrastructure, and will be subject to daily comprehensive security checks and all personal data will not be stored on the Hyperledger Fabric Blockchain [29]. During the presentation, the CBN also discussed how Nigerian banks will onboard their customers unto the eNaira ecosystem [30]

## Carrying out FX Transactions

An interesting part of the presentation were the options CBN considered for how International Money Transfer Operators (“IMTOs”) will interact with the ecosystem to enable Foreign Exchange (FX) transactions.

The first option is for the IMTOs to provide collateral to obtain eNaira from the CBN. A local bank that has partnered with the IMTO will provide a bank guarantee to the CBN. The apex bank will then advance eNaira to the local bank who will receive the foreign currency from the IMTO through its correspondent bank in the jurisdiction the currency was issued. Upon receipt, the local bank will send the foreign currency to the CBN and proceed to debit the account of the IMTO. The eNaira received by the local bank from CBN will then be sent to the IMTO.

The second option is for the CBN to permit IMTOs to use their digital wallets to receive eNaira by sending foreign currency to their local banks who will send the money to CBN before they receive the eNaira. Once they send the foreign currency through their local bank to the CBN, the CBN through the local bank, will send the eNaira to the IMTOs wallet.

The last option was to adopt the standard procedure for receiving foreign currency in Nigeria which is the beneficiary receiving the foreign currency that was sent to him or her through their domiciliary account. However, instead of receiving the foreign currency, the beneficiary will receive eNaira.

[23] Ibid. [24] Ibid. [25] Ibid. [26] Ibid. [27] “CBN drafts guidelines to Nigerian banks on e-Naira” by Olumide Adesina, for Nairametrics, accessed 30 August 2021.

<https://nairametrics.com/2021/08/29/cbn-drafts-guidelines-to-nigerian-banks-on-e-naira/>

[28] Ibid. [29] “e-Naira: CBN sets N50,000 maximum transfer limits for non-account holders” by Olumide Adesina, for Nairametrics, accessed 30 August 2021.

<https://nairametrics.com/2021/08/30/e-naira-cbn-sets-n50000-maximum-transfer-limits-for-non-account-holders/>

[30] Ibid.

The sender instructs their bank to send a certain sum to the IMTO's bank. Once the IMTO confirms receipt, it will send eNaira from its wallet to the beneficiary's wallet.

### **Non-interest bearing eNaira**

The CBN stated that the eNaira will be a non-interest bearing CBDC, meaning that the eNaira will not be a store of wealth and cannot generate any interest or returns if kept for a prolonged period of time. It will only be used as a means of exchange and it seems there will be no interest bearing eNaira according to the presentation. The non-interest-bearing nature of the eNaira makes it similar to physical cash as physical cash generates no intrinsic value as well.

### **The Speed Wallet**

CBN introduced the official digital wallet for the eNaira called the "Speed Wallet" [31]. The CBN explained that the Speed Wallet will have a tier structure for consumers who wish to use it, with their respective KYC requirements and daily transaction limits [32]. The CBN stated that the Speed Wallet is merely an alternative wallet until local banks provide theirs [33]. During the presentation, the CBN revealed that the use of the Speed Wallet will attract no transaction costs whether the transaction is a peer-to-peer (P2P) transaction or between a customer and a merchant, and even withdrawals from the wallet will attract no charges.

## **THE CHALLENGES WITH A CENTRAL BANK DIGITAL CURRENCY**

According to the IMF, one of the risks of adopting a CBDC is that it can lead to the disruption of the banking system and not in a good way [34]. Individuals may decide to hold CBDCs instead of making deposits, thereby affecting the amount of money banks have at their disposal for loans and other financial products they offer. The local banks may have to raise their interest rates to ensure people keep their deposits. This may have a ripple effect on the interest banks will charge on loans as the banks may raise the interest rates to ensure payment into the interest-bearing accounts as promised. However, it seems the eNaira may not have this issue since it is a non-interest bearing CBDC.

Another problem with the use of CBDCs is that holders of the digital currency may turn to it in unstable financial climates. However, the eNaira may also not have such risk as it seems that there is no value tied to it other than being used as a means of exchange.

Though there are other assets that individuals can run to like bonds or mutual funds, the use of cryptocurrency and other digital assets as a store of value seems to point towards a trend of individuals using technologically backed medium of exchanges as speculative assets.

[31] "Central Bank of Nigeria to Launch Speed Wallet" by Marvelous Akpere, for Crypto TV Plus, accessed 30 August 2021. <https://cryptotvplus.com/2021/08/central-bank-of-nigeria-to-launch-speed-wallet-for-the-e-naira/>  
[32] *Ibid.*  
[33] "e-Naira: CBN sets N50,000 maximum transfer limits for non-account holders" by Olumide Adesina, for Nairametrics, accessed 30 August 2021. <https://nairametrics.com/2021/08/30/e-naira-cbn-sets-n50000-maximum-transfer-limits-for-non-account-holders/>  
[34] "Central Bank Digital Currencies: 4 Questions and Answers" by Tobias Adrian and Tommaso Mancini-Griffoli for the International Monetary Fund Blog accessed 30 August 2021. <https://blogs.imf.org/2019/12/12/central-bank-digital-currencies-4-questions-and-answers/>

CBDCs are pegged to the local currency, so if the local currency is falling against other foreign currencies in the FX market, the CBDC will most likely fall and not be seen as a worthwhile asset to use as a store of value. However, if central banks design their CBDCs in such way that it can integrate with the FX market, foreigners may use CBDCs of stabilised financial climes as a store of value which will affect their local currency and their domestic CBDC.

The IMF believes that;

*“Offering CBDC could be very costly for central banks, and it could pose risks to their reputations. Offering full-fledged CBDC requires central banks to be active along several steps of the payments value chain, potentially including interfacing with customers, building front-end wallets, picking and maintaining technology, monitoring transactions, and being responsible for anti-money laundering and countering the financing of terrorism. Failure to satisfy any of these functions, due to technological glitches, cyber-attacks, or simply human error, could undermine the central bank’s reputation [35].”*

CBDCs may create more responsibilities for central banks that are already burdened with the arduous task of ensuring that the financial system of their country is efficient and stable. With the adoption of CBDCs, central banks may become more than just regulators and evolve into a FI operating alongside

other private entities which is a risky venture for a regulator to attempt.

Due to the issues with CBDCs, financial experts are tinkering with the idea of “Synthetic CBDCs” [36]. Synthetic CBDCs are digital currencies which are issued, minted, and managed by private entities. The creation of a consumer facing wallet, interaction with customers, and even assisting with Anti-Money Laundering and KYC requirements are handled by these private entities while the central banks give backing to the digital currencies the private entities issue through the central bank reserves and the trust of their involvement. Hence, innovation is left for the private sector to think up new ways to create and implement the digital currency while the central bank regulates and ensures that the digital currencies are properly used. This gives the central bank more breathing space and may mitigate the inherent risk of CBDCs.

## CONCLUSION

If properly implemented, the eNaira could reignite interest in cryptocurrency which CBN prohibited FIs from dealing in sometime in February [37] and blockchain technology which could lead to wide spread adoption of blockchain technology in other sectors.

[35] Ibid.

[36] Tobias Adrian and Tommaso Mancini-Griffoli, “The rise of digital money”, Page 12 and Page 14, International Monetary Fund, 2019.

[37] “CBN Orders Banks to Shutdown Accounts of People and Companies Transacting Cryptos” by Tomiwa Chaleye for Technext, accessed 30 August 2021. <https://technext.ng/2021/02/05/cbn-orders-banks-to-shutdown-accounts-of-people-and-companies-transacting-cryptos/>



It could also assist CBN with its financial inclusion target of 80% percent of Nigerians [38]

having access to financial services, and it could create a seamless cross border solution for Nigeria.

However, with the current design, it seems the CBN wants to take on the herculean task of minting, issuing, distributing, and redeeming the eNaira. It will also involve FIs in the management and execution of the digital currency. It is uncertain whether the CBN and the FIs can carry out all these responsibilities to manage a digital currency and if they have the technological infrastructure and knowhow to do so. Also, with the appeal of no transaction charges attached to the eNaira, Nigerians may adopt the eNaira as their go to means of exchange for business and consumption, inadvertently creating a token that may challenge local banks internet banking offerings and e-money. There is also a growing concern that the current design does not address how the eNaira will be converted to any foreign currency to foster cross border payments and it seems like the eNaira may just serve as a digital wallet and application instead of creating more value for Nigerians.

[38] Central Bank of Nigeria, "National Financial Inclusion Strategy (Revised)" Central Bank of Nigeria, 2018.

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